

CLAIMS

1. A frame relay communication device comprising
a sending unit which sends at least twice
continuously, to a frame relay network, a state inquiry
5 message for inquiring normality of a data link between a
frame relay communication device of a party on the other
end of communication connected through the frame relay
network; and

a receiving unit which receives a response message
10 corresponding to the state inquiry message sent from said
frame relay network to recognize a state of the data link
based on the received response message.

2. The frame relay communication device according to
15 claim 1, wherein said sending unit sends the state inquiry
message to the frame relay network a plurality of times
until said receiving unit receives the response message.

3. The frame relay communication device according to
20 claim 1, further comprising a fault detecting unit which
detects failure and recovery of said frame relay network,
wherein after said frame relay network has recovered
from the failure, said sending unit sends the state inquiry
message at least twice continuously immediately after the
25 recovery.

4. A frame relay switchboard for accommodating a frame relay communication device which sends, to said frame relay network at predetermined time intervals, a first state inquiry message for inquiring normality of a first data link between a frame relay network, or a second state inquiry message for inquiring normality of a second data link between a frame relay communication device of a party on the other end of communication connected through said frame relay network, based on a PVC state confirming procedure, said frame relay switchboard comprising:

a receiving unit which receives the first state inquiry message and the second state inquiry message;

a sending unit which sends, to said frame relay communication device, the first state inquiry message received by said receiving unit, a first response message or a second response message corresponding to the second state inquiry message; and

a monitor unit which monitors a state of the second data link,

wherein if a state of the second data link has changed, said sending unit sends the second response message to said frame relay communication device based on a monitoring-result of said monitor unit irrespective of a reception-result in said receiving unit.

5. A frame relay communication system comprising:

a frame relay communication device including,

a sending unit which sends, to a frame relay network at least twice continuously, a state inquiry message for inquiring normality of a data link between a frame relay communication device of a party on the other end of communication connected through a frame relay network; and

a receiving unit which receives a response message corresponding to the state inquiry message sent from said frame relay network to recognize a state of the data link based on a reception-result; and

a frame relay switchboard including,

a receiving unit disposed in said frame relay network for receiving the state inquiry message; and

a sending unit which sends, to said frame relay communication device, the response message corresponding to the state of the data link.

6. A method of controlling a procedure for confirming PVC state comprising:

sending a state inquiry message, to a frame relay network at least twice continuously, for inquiring normality of a data link between a frame relay communication device of a party on the other end of communication

connected through a frame relay network; and

receiving a response message corresponding to the state inquiry message sent from said frame relay network to recognize a state of the data link.

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7. A method of controlling a procedure for confirming PVC state comprising:

10 sending a state inquiry message, to a frame relay network at least twice continuously, for inquiring normality of a data link between a frame relay communication device and another frame relay communication device connected to each other through a frame relay network;

receiving the state inquiry message;

15 sending a response message in accordance with a state of the data link based on received the state inquiry message; and

receiving the response message corresponding to the state inquiry message and recognizing the state of the data link based on the received response message.

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